



# **ANADARKO PETROLEUM CORP.**

**ANADARKO COLORADO NORTHERN ZONE NAD 83  
WELD\_RIVERBEND 2-24 PAD  
RIVERBEND 2-24**

**RIVERBEND 2-24**

**Plan: RIVERBEND 2-24 (wp01)**

## **Standard Planning Report**

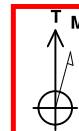
**19 October, 2010**



Project: ANADARKO COLORADO NORTHERN ZONE NAD 83  
 Site: WELD\_RIVERBEND 2-24 PAD  
 Well: RIVERBEND 2-24  
 Wellbore: RIVERBEND 2-24  
 Section:  
 SHL:  
 Design: RIVERBEND 2-24 (wp01)  
 Latitude: 40° 2' 33.112 N  
 Longitude: 104° 50' 14.734 W  
 GL: 4923.0  
 KB: WELL @ 4923.0ft (Original Well Elev)



**Weatherford**



Azimuths to True North  
 Magnetic North: 8.92°

Magnetic Field  
 Strength: 52984.5nT  
 Dip Angle: 66.78°  
 Date: 10/19/2010  
 Model: BGGM2010

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3294.0	3315.8	PRKMN TOP
4624.0	4645.8	SX TOP
7156.0	7177.8	NIO TOP
7503.0	7524.8	CODELL TOP
7588.0	7609.8	GRNHRN TOP
7938.0	7959.8	JSND TOP

#### CASING DETAILS

TVD	MD	Name	Size
900.0	900.0	9 5/8"	9-5/8

#### SECTION DETAILS

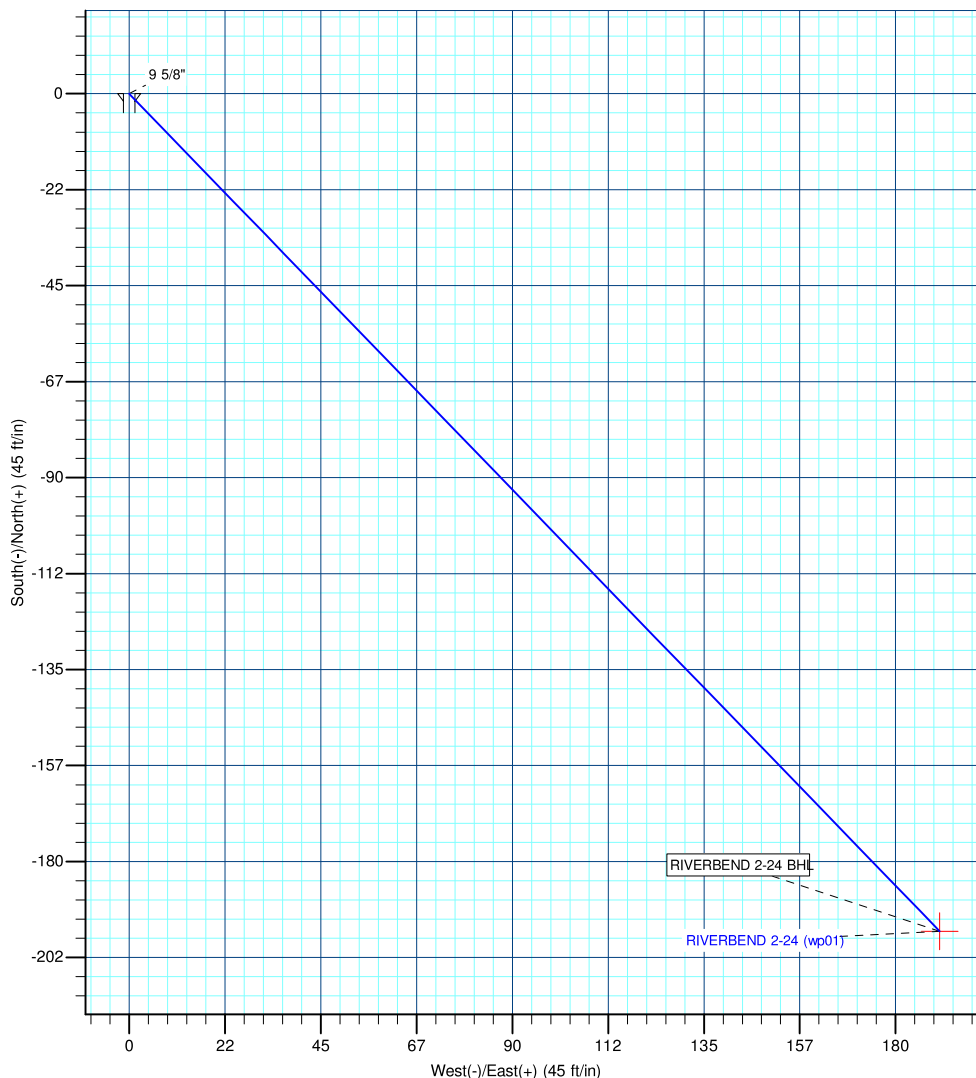
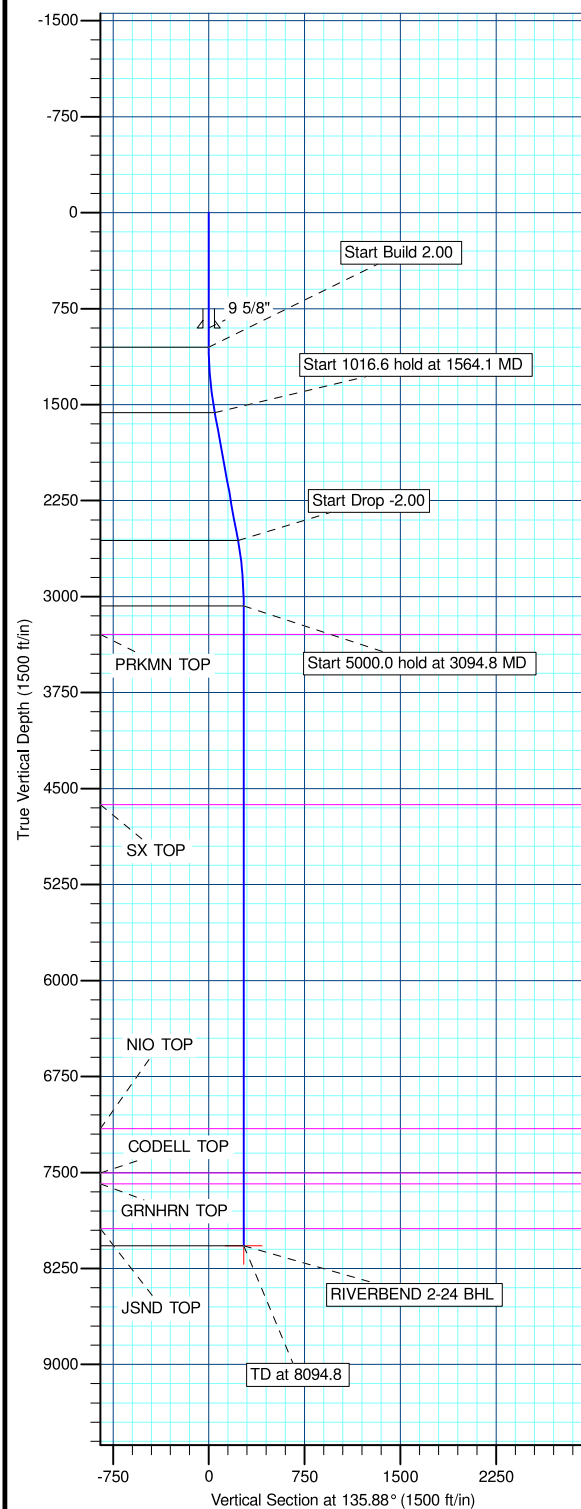
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
1050.0	0.00	0.00	1050.0	0.0	0.0	0.00	0.00	0.0	
1564.1	10.28	135.88	1561.4	-33.0	32.0	2.00	135.88	46.0	
2580.7	10.28	135.88	2561.6	-163.3	158.4	0.00	0.00	227.5	
3094.8	0.00	0.00	3073.0	-196.3	190.4	2.00	180.00	273.5	
8094.8	0.00	0.00	8073.0	-196.3	190.4	0.00	0.00	273.5	

#### WELL DETAILS: RIVERBEND 2-24

+N/-S	+E/-W	Northing	Ground Level: Easting	4923.0 Latitude	Longitude	Slot
0.0	0.0	1259032.84	3185505.00	40° 2' 33.112 N	104° 50' 14.734 W	

#### WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
RIVERBEND 2-24 BHL	8073.0	-196.3	190.4	40° 2' 31.171 N	104° 50' 12.286 W	Point



Plan: RIVERBEND 2-24 (wp01) (RIVERBEND 2-24/RIVERBEND 2-24)

Created By: Jason Daguitera Date: 15:30, October 19 2010



# Weatherford International Ltd.

## Planning Report

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RIVERBEND 2-24
<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>TVD Reference:</b>	WELL @ 4923.0ft (Original Well Elev)
<b>Project:</b>	ANADARKO COLORADO NORTHERN ZONE NAD 83	<b>MD Reference:</b>	WELL @ 4923.0ft (Original Well Elev)
<b>Site:</b>	WELD_RIVERBEND 2-24 PAD	<b>North Reference:</b>	True
<b>Well:</b>	RIVERBEND 2-24	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	RIVERBEND 2-24		
<b>Design:</b>	RIVERBEND 2-24 (wp01)		

<b>Project</b>	ANADARKO COLORADO NORTHERN ZONE NAD 83, ROCKIES, ROCKIES		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

<b>Site</b>	WELD_RIVERBEND 2-24 PAD		
<b>Site Position:</b>		<b>Northing:</b>	1,259,032.84ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,185,505.00ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40° 2' 33.112 N
		<b>Longitude:</b>	104° 50' 14.734 W
		<b>Grid Convergence:</b>	0.43 °

<b>Well</b>	RIVERBEND 2-24		
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>
			ft
			<b>Latitude:</b>
			40° 2' 33.112 N
			<b>Longitude:</b>
			104° 50' 14.734 W
			<b>Ground Level:</b>
			4,923.0ft

<b>Wellbore</b>	RIVERBEND 2-24				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2010	10/19/2010	8.92	66.78	52,985

<b>Design</b>	RIVERBEND 2-24 (wp01)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	135.88

<b>Plan Sections</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,050.0	0.00	0.00	1,050.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,564.1	10.28	135.88	1,561.4	-33.0	32.0	2.00	2.00	0.00	135.88	
2,580.7	10.28	135.88	2,561.6	-163.3	158.4	0.00	0.00	0.00	0.00	
3,094.8	0.00	0.00	3,073.0	-196.3	190.4	2.00	-2.00	0.00	180.00	
8,094.8	0.00	0.00	8,073.0	-196.3	190.4	0.00	0.00	0.00	0.00	RIVERBEND 2-24 I

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RIVERBEND 2-24
<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>TVD Reference:</b>	WELL @ 4923.0ft (Original Well Elev)
<b>Project:</b>	ANADARKO COLORADO NORTHERN ZONE NAD 83	<b>MD Reference:</b>	WELL @ 4923.0ft (Original Well Elev)
<b>Site:</b>	WELD_RIVERBEND 2-24 PAD	<b>North Reference:</b>	True
<b>Well:</b>	RIVERBEND 2-24	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	RIVERBEND 2-24		
<b>Design:</b>	RIVERBEND 2-24 (wp01)		

**Planned Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>9 5/8"</b>									
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,050.0	0.00	0.00	1,050.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	1.00	135.88	1,100.0	-0.3	0.3	0.4	2.00	2.00	0.00
1,200.0	3.00	135.88	1,199.9	-2.8	2.7	3.9	2.00	2.00	0.00
1,300.0	5.00	135.88	1,299.7	-7.8	7.6	10.9	2.00	2.00	0.00
1,400.0	7.00	135.88	1,399.1	-15.3	14.9	21.4	2.00	2.00	0.00
1,500.0	9.00	135.88	1,498.2	-25.3	24.6	35.3	2.00	2.00	0.00
1,564.1	10.28	135.88	1,561.4	-33.0	32.0	46.0	2.00	2.00	0.00
1,600.0	10.28	135.88	1,596.7	-37.6	36.5	52.4	0.00	0.00	0.00
1,700.0	10.28	135.88	1,695.1	-50.4	48.9	70.3	0.00	0.00	0.00
1,800.0	10.28	135.88	1,793.5	-63.3	61.3	88.1	0.00	0.00	0.00
1,900.0	10.28	135.88	1,891.8	-76.1	73.8	106.0	0.00	0.00	0.00
2,000.0	10.28	135.88	1,990.2	-88.9	86.2	123.8	0.00	0.00	0.00
2,100.0	10.28	135.88	2,088.6	-101.7	98.6	141.7	0.00	0.00	0.00
2,200.0	10.28	135.88	2,187.0	-114.5	111.0	159.5	0.00	0.00	0.00
2,300.0	10.28	135.88	2,285.4	-127.3	123.5	177.4	0.00	0.00	0.00
2,400.0	10.28	135.88	2,383.8	-140.1	135.9	195.2	0.00	0.00	0.00
2,500.0	10.28	135.88	2,482.2	-153.0	148.3	213.1	0.00	0.00	0.00
2,580.7	10.28	135.88	2,561.6	-163.3	158.4	227.5	0.00	0.00	0.00
2,600.0	9.90	135.88	2,580.6	-165.7	160.7	230.9	2.00	-2.00	0.00
2,700.0	7.90	135.88	2,679.4	-176.8	171.5	246.3	2.00	-2.00	0.00
2,800.0	5.90	135.88	2,778.7	-185.5	179.8	258.3	2.00	-2.00	0.00
2,900.0	3.90	135.88	2,878.3	-191.6	185.8	266.9	2.00	-2.00	0.00
3,000.0	1.90	135.88	2,978.2	-195.2	189.3	271.9	2.00	-2.00	0.00
3,094.8	0.00	0.00	3,073.0	-196.3	190.4	273.5	2.00	-2.00	0.00
3,100.0	0.00	0.00	3,078.2	-196.3	190.4	273.5	0.00	0.00	0.00
3,200.0	0.00	0.00	3,178.2	-196.3	190.4	273.5	0.00	0.00	0.00
3,300.0	0.00	0.00	3,278.2	-196.3	190.4	273.5	0.00	0.00	0.00
<b>PRKMN TOP</b>									
3,315.8	0.00	0.00	3,294.0	-196.3	190.4	273.5	0.00	0.00	0.00
3,400.0	0.00	0.00	3,378.2	-196.3	190.4	273.5	0.00	0.00	0.00
3,500.0	0.00	0.00	3,478.2	-196.3	190.4	273.5	0.00	0.00	0.00
3,600.0	0.00	0.00	3,578.2	-196.3	190.4	273.5	0.00	0.00	0.00
3,700.0	0.00	0.00	3,678.2	-196.3	190.4	273.5	0.00	0.00	0.00
3,800.0	0.00	0.00	3,778.2	-196.3	190.4	273.5	0.00	0.00	0.00
3,900.0	0.00	0.00	3,878.2	-196.3	190.4	273.5	0.00	0.00	0.00
4,000.0	0.00	0.00	3,978.2	-196.3	190.4	273.5	0.00	0.00	0.00
4,100.0	0.00	0.00	4,078.2	-196.3	190.4	273.5	0.00	0.00	0.00
4,200.0	0.00	0.00	4,178.2	-196.3	190.4	273.5	0.00	0.00	0.00
4,300.0	0.00	0.00	4,278.2	-196.3	190.4	273.5	0.00	0.00	0.00
4,400.0	0.00	0.00	4,378.2	-196.3	190.4	273.5	0.00	0.00	0.00
4,500.0	0.00	0.00	4,478.2	-196.3	190.4	273.5	0.00	0.00	0.00

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RIVERBEND 2-24
<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>TVD Reference:</b>	WELL @ 4923.0ft (Original Well Elev)
<b>Project:</b>	ANADARKO COLORADO NORTHERN ZONE NAD 83	<b>MD Reference:</b>	WELL @ 4923.0ft (Original Well Elev)
<b>Site:</b>	WELD_RIVERBEND 2-24 PAD	<b>North Reference:</b>	True
<b>Well:</b>	RIVERBEND 2-24	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	RIVERBEND 2-24		
<b>Design:</b>	RIVERBEND 2-24 (wp01)		

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,600.0	0.00	0.00	4,578.2	-196.3	190.4	273.5	0.00	0.00	0.00
<b>SX TOP</b>									
4,645.8	0.00	0.00	4,624.0	-196.3	190.4	273.5	0.00	0.00	0.00
4,700.0	0.00	0.00	4,678.2	-196.3	190.4	273.5	0.00	0.00	0.00
4,800.0	0.00	0.00	4,778.2	-196.3	190.4	273.5	0.00	0.00	0.00
4,900.0	0.00	0.00	4,878.2	-196.3	190.4	273.5	0.00	0.00	0.00
5,000.0	0.00	0.00	4,978.2	-196.3	190.4	273.5	0.00	0.00	0.00
5,100.0	0.00	0.00	5,078.2	-196.3	190.4	273.5	0.00	0.00	0.00
5,200.0	0.00	0.00	5,178.2	-196.3	190.4	273.5	0.00	0.00	0.00
5,300.0	0.00	0.00	5,278.2	-196.3	190.4	273.5	0.00	0.00	0.00
5,400.0	0.00	0.00	5,378.2	-196.3	190.4	273.5	0.00	0.00	0.00
5,500.0	0.00	0.00	5,478.2	-196.3	190.4	273.5	0.00	0.00	0.00
5,600.0	0.00	0.00	5,578.2	-196.3	190.4	273.5	0.00	0.00	0.00
5,700.0	0.00	0.00	5,678.2	-196.3	190.4	273.5	0.00	0.00	0.00
5,800.0	0.00	0.00	5,778.2	-196.3	190.4	273.5	0.00	0.00	0.00
5,900.0	0.00	0.00	5,878.2	-196.3	190.4	273.5	0.00	0.00	0.00
6,000.0	0.00	0.00	5,978.2	-196.3	190.4	273.5	0.00	0.00	0.00
6,100.0	0.00	0.00	6,078.2	-196.3	190.4	273.5	0.00	0.00	0.00
6,200.0	0.00	0.00	6,178.2	-196.3	190.4	273.5	0.00	0.00	0.00
6,300.0	0.00	0.00	6,278.2	-196.3	190.4	273.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,378.2	-196.3	190.4	273.5	0.00	0.00	0.00
6,500.0	0.00	0.00	6,478.2	-196.3	190.4	273.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,578.2	-196.3	190.4	273.5	0.00	0.00	0.00
6,700.0	0.00	0.00	6,678.2	-196.3	190.4	273.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,778.2	-196.3	190.4	273.5	0.00	0.00	0.00
6,900.0	0.00	0.00	6,878.2	-196.3	190.4	273.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,978.2	-196.3	190.4	273.5	0.00	0.00	0.00
7,100.0	0.00	0.00	7,078.2	-196.3	190.4	273.5	0.00	0.00	0.00
<b>NIO TOP</b>									
7,177.8	0.00	0.00	7,156.0	-196.3	190.4	273.5	0.00	0.00	0.00
7,200.0	0.00	0.00	7,178.2	-196.3	190.4	273.5	0.00	0.00	0.00
7,300.0	0.00	0.00	7,278.2	-196.3	190.4	273.5	0.00	0.00	0.00
7,400.0	0.00	0.00	7,378.2	-196.3	190.4	273.5	0.00	0.00	0.00
7,500.0	0.00	0.00	7,478.2	-196.3	190.4	273.5	0.00	0.00	0.00
<b>CODELL TOP</b>									
7,524.8	0.00	0.00	7,503.0	-196.3	190.4	273.5	0.00	0.00	0.00
7,600.0	0.00	0.00	7,578.2	-196.3	190.4	273.5	0.00	0.00	0.00
<b>GRNHRN TOP</b>									
7,609.8	0.00	0.00	7,588.0	-196.3	190.4	273.5	0.00	0.00	0.00
7,700.0	0.00	0.00	7,678.2	-196.3	190.4	273.5	0.00	0.00	0.00
7,800.0	0.00	0.00	7,778.2	-196.3	190.4	273.5	0.00	0.00	0.00
7,900.0	0.00	0.00	7,878.2	-196.3	190.4	273.5	0.00	0.00	0.00
<b>JSND TOP</b>									
7,959.8	0.00	0.00	7,938.0	-196.3	190.4	273.5	0.00	0.00	0.00
8,000.0	0.00	0.00	7,978.2	-196.3	190.4	273.5	0.00	0.00	0.00
8,094.8	0.00	0.00	8,073.0	-196.3	190.4	273.5	0.00	0.00	0.00



# Weatherford International Ltd.

## Planning Report

<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well RIVERBEND 2-24
<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>TVD Reference:</b>	WELL @ 4923.0ft (Original Well Elev)
<b>Project:</b>	ANADARKO COLORADO NORTHERN ZONE NAD 83	<b>MD Reference:</b>	WELL @ 4923.0ft (Original Well Elev)
<b>Site:</b>	WELD_RIVERBEND 2-24 PAD	<b>North Reference:</b>	True
<b>Well:</b>	RIVERBEND 2-24	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	RIVERBEND 2-24		
<b>Design:</b>	RIVERBEND 2-24 (wp01)		

### Design Targets

#### Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
RIVERBEND 2-24 BH	0.00	0.00	8,073.0	-196.3	190.4	1,258,837.93	3,185,696.85	40° 2' 31.171 N	104° 50' 12.286 W
- plan hits target center									
- Point									

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
900.0	900.0	9 5/8"	9-5/8	12-1/4

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,645.8	4,624.0	SX TOP			
3,315.8	3,294.0	PRKMN TOP			
7,524.8	7,503.0	CODELL TOP			
7,177.8	7,156.0	NIO TOP			
7,959.8	7,938.0	JSND TOP			
7,609.8	7,588.0	GRNHRN TOP			